PROSYANIK, G. V. (Eng.)

"Obtaining Precision Steel Castings with the Use of Press-Formed Molds and Cores Made of Chemically Setting Compositions" and "Shell-Mold Casting of Precision Parts," Metody polucheniya otlivok povyshennoy tochnosti (Methods of Making High-Precision Castings), Moscow, Mashgiz, 1958. 140 p.

PURPOSE: This book is intended for engineers and technicians at plants and institutes, as well as in research and planning organizations in all branches of the machine-building industry.

S/123/59/000/008/036/043
A004/A002

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 8, p. 198 # 30058

AUTHORS: Danilevskaya, R. G., Prosyanik, G. V.

TITLE: The CKT-P (SKT-R) Separating Compound

PERIODICAL: Tekhnol. avtomobilestroyeniya, 1958, No. 3, p. 27

TEXT: SKT-R is a solution of SKT-caoutchouc (40 gr) in white spirit (1,000 cm^3). Investigations showed that this compound, concerning technological properties, surpasses all separating compounds which have been used hitherto. Its heat resistance amounts to approximately 300°C. The compound is applied in a cold state to the model by a sprayer without noticeable gassing. After a single application of the compound, 20 - 40 shell castings can be taken from the model. The insignificant foundry scab can be removed with a metal brush. The SKT-R consumption per ton of casting amounts to 0.8-1 liter. The cost of one liter is 14.50 rubles. SKT-R is recommended for shell molding processes.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

S/123/59/000/006/018/025
A005/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 6, p. 219, # 21634

AUTHOR: Prosyanik, G. V.

TITLE: Obtaining Precise Steel Ingots in Squeezed Rods of Chemically Hardening Mixtures

PERIODICAL: V sb.: Metody polucheniya otlivok povyshennoy tochnosti. Moscow, Mashgiz, 1958, pp. 120-123

TEXT: The Moskovskiy avtozavod im. Likhacheva (Moscow Automobile Works imeni Likhachev) performs investigations for obtaining precision ingots in thin-walled molds - rods of chemically hardening mistures containing Gremyachevskiy sand and water glass. The rods are produced by machines-jolters of ВФ-2 (VF-2) type. The molds built up of these rods and filled up with steel 45 at 1,550°C, serve to produce crankshafts for the compressor of the ЗИЛ-150 (ZIL-150) truck. The cooled ingots are easily knocked out from the mold and have smooth surface. The allowance for mechanical processing of the ingots is 0,7-1 mm at the side. There are 2 figures. V. I. M.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

ASSONOV, A.D., kand.tekhn.nauk; LAKEDEMONSKIY, A.V.; PROSYANIK, G.V.

Shell molding of gears. Avt.prom. no.1:28-30 Ja '59.
(MIRA 12:1)

1. Moskovskiy avtozavod imeni Likhacheva.
(Shell molding (Founding))

PROSYANIK, N.S.

TSIMBLER, M.Ye.; PROSYANIK, N.S.

Preparation and study of a tartrate copper complex. Ukr.khim.zhur. 19 no.3:282-288 '53. (MLRA 7:4)

1. Kiyevskiy gidromeliorativnyy institut.
(Copper organic compounds) (Tartrates)

TSIMBLER, M.Ye.; PROSYANIK, N.S.

Chemical characteristics of the reaction of the systems $Pb(OH)_2$ - $K_2C_4H_4O_6$, and $Cd(OH)_2$ - $NaHC_4H_4O_6$ with an excess of hydroxy acid salt present in the solution. Ukr.khim.zhur. 29 no.6:582-585 '63. (MIRA 16:9)

1. Ukrainskiy institut inzhenerov vodnogo khozyaystva.
(Systems (Chemistry)) (Complex compounds) (Tataric acid)

SKOBETS, Ye.M., doktor khimicheskikh nauk, prof.; PROSYANIK, N.S. assistent

Polarographic analysis of soils. Nauch. trudy UASHN 10:251-257 '60. (MIRA 14:3)

(Soils—Analysis)
(Polarography)

GORENBEYN, Ye.Ya.; PROSYANIK, N.S.

Study of the interaction between potassium thiocyanate, ammonium thiocyanate, sodium iodide and water in acetone as the solvent, using the electric conductivity method. Zhur. neorg. khim. 5 no. 12:2847-2848 D '60. (MIRA 13:12)
(Potassium thiocyanate) (Ammonuim thiocyanate)
(Sodium iodine)

TSIMBLER, M.Ye.; DERENOVSKIY, V.I.; PROSYANIK, N.S.

On the article by M.Bobtel'skii "Principles of heterometry and its interpretation". Zhur.neorg.khim. 7 no.4:954 Ap '62.
(MIRA 15:4)
(Complex compounds) (Bobtel'skii, M.)

KATORZHNOV, N.D.; VOITELEV, Yu.A.; PROSYANIK, Yu.V.

Regulators of the molecular weight of polycaprolactam and action mechanism. Khim. volok. no.6:23-26 '64.

(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

1. ISAKHANYAN, N.T.; KOLOTILIN, YE.I.; KUMANIN, I.B.; OLOFINSKIY, N.F.; PROSYANKI, G.V.; PANTALOV, L.I.

2. USSR (600)

4. Sand, Foundry

7. Repeated use of core mixtures., Lit.proiz, No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

107-57-4-32/54

AUTHOR: Prosyankin, A. (Pos. Bykovo, Moscow oblast)

TITLE: An Attachment for a Single-channel TV Set (Pristavka k odnoprogrammnomu televizoru)

PERIODICAL: Radio, 1957, Nr 4, pp 42-43 (USSR)

ABSTRACT: With minimum changes in a single-channel TV set, the attachment permits reception of three TV channels and also reception of VHF FM stations in the 65-72 mc band. The attachment is applicable to any superheterodyne amateur TV set and also to factory-built "Avangard," Temp-1," and other sets. The attachment increases sensitivity of a TV set so that the second program of the Moscow TV Center (the third TV channel) can be received in the range of 40-60 km. The 3-tube attachment is simple to build and can be aligned on the TV test pattern without measuring instruments. Two stages of rf amplification use one 6Zh1P and one 6Zh3P. The 6N15P double triode is used for heterodyne and mixer. A circuit diagram, parts data, instructions for winding coils and for alignment are supplied.
There are three figures in the article.

Card 1/1

PROSYANKIN A.

11. Adapters to Increase Number of TV Channels

"Adapters to Single-Program Television Receivers," by A. Prosyankin, Radio, No 4, Apr 57, pp 42-43

This adapter permits the reception of three TV channel programs and the USW-FM radio program (65-72 Mc) on such single-program TV receivers as "Avangard" and "Temp-I." The adapter has a two-stage radio-frequency amplification, local oscillator, and mixer. Input to the adapter is in the form of a autotransformer. The first RF amplification stage is assembled on a 6Zh1P tube, and the second on 6Zh3P tube. The converter is assembled on a 6N15P twin-triode tube. The frequency of the local oscillator can be varied from 65 to 115 Mc.

The adapter improves the sensitivity of the set to such an extent that the radius of reception in is increased to 60 km.

A correctly assembled adapter can be used with the TV receiver without any further adjustment. (U)

Sum 1424

MESHKOVA, OV., (deceased), PROKHARKIN, .. I. (deceased), CHERNOV, P. A. and others.

"Problems of Argon-Arc Welding of Light Alloys."

paper presented at All-Union Scientific-Technical Conference on Welding in Shielding Gases, Leningrad, Dec 1957.

(Svarochnoye Proizvodstvo, 1958, No. 4, pp 46-47 - author Tyul'kov, M. L.)

SOV/137-59-1-638

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 86 (USSR)

AUTHORS: Petrov, G. L., Prosyankin, I. P.

TITLE: A Novel Technique for the Evaluation of the Effects of Welding Materials and Certain Basic Parameters of Welding on the Susceptibility of Welds to Hot Cracking (Novaya metodika opredeleniya vliyaniya svarochnykh materialov i nekotorykh osnovnykh parametrov tekhnologii svarki na sklonnost' metalla svarnykh shvov k obrazovaniyu goryachikh treshchin)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 189, pp 93-110

ABSTRACT: The method developed makes it possible to establish a relationship between such factors as the employment of various welding materials, the size of the root opening, the included groove angle, the welding current, and other technological parameters and the tendency of welds toward hot cracking (HC). In order to determine the range of temperatures corresponding to permissible deformations of the weld metal, preliminary investigations were carried out on specimens which had been welded with a Kh20N10G6 welding wire in conjunction with an alkaline flux; the properties of the weld metal were studied

Card 1/3

A Novel Technique for the Evaluation of the Effects of Welding Materials (cont.)

at elevated temperatures maintained in an oven. The heating of specimens was conducted in a stepwise fashion, the exposure to the testing temperature constituting 30-40 minutes. The rate of deformation of the specimens amounted to 40 mm/min. Regions of brittle failure of metal were observed at temperatures above 1360°C. The following procedure was employed in evaluating the HC tendencies of welds: Two halves of a specimen, 20x45 mm in cross section, were mounted in a rigid frame with an initial fixed gap a between them. The gap was then reduced by a given distance Δa by means of heating of the sections with an annular multiflame burner; the two sections of the specimen were then arc-welded, the amount of filler metal being rigidly controlled; the heated portion of the specimen was cooled in water, thereby inducing a tensile deformation in the specimen. The absolute magnitude of the maximum deformation possible in a weld without formation of hot cracks in the latter was taken as the criterion in evaluating the tests results. It was established that the HC tendencies of the weld metal become more pronounced as the root opening gap a is increased and the included groove angle is reduced. Compared with TsT-7 electrodes, which produce welds of a composition equivalent to that of Kh20N10G6 steel, KTI-5 electrodes exhibit the least tendency toward HC. Even more susceptible to HC than TsT-7 electrodes are electrodes of the Kh22N15 type. In the case of automatic welding, maximum stability is found in welds

A Novel Technique for the Evaluation of the Effects of Welding Materials (cont.)

performed with welding wire of the EI613 grade in conjunction with AN-14 flux. Less stable are welds performed with the same grade of welding wire but with flux of the 11/5 type. Welding wire of the Sv-Kh20N10G6 grade yielded poorer results when used with either flux. Bibliography: 12 references.

V. S.

SOV/135-59-1-3/18

AUTHORS: Russo, V.L., and Prosyankin, I.P., Engineers

TITLE: Properties of the Heat-Affected Zone in Welding "V-95" Alloys (Svoystva zony termicheskogo vliyaniya pri svarke splava V-95)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 1, pp 9-12 (USSR)

ABSTRACT: Three different methods of argon arc welding "V-95" alloys with tungsten electrodes were used to calculate heat distribution and cooling rate in different spots of the heat-affected zone, for the purpose of determining changes in metal properties according to welding technology. Structural changes occured mostly near the fusion line where the temperature is 600 to 650°C, and less in zones of 400 to 580°C. Metal properties

Card 1/2

Properties of the Heat-Affected Zone in Welding "V-95" Alloys

in zones heated to 580° improve with a higher cooling rate. It is recommended to use heat sources and technology which reduce the heat-affected zone in the 600 - 650°C temperature range and to step-up the cooling process. There are 3 tables, 4 graphs, and 2 sets of micro-photos.

S/137/61/000/002/017/046
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1961, No. 2, p. 13 # 2E106

AUTHORS: Russo, V. L., Prosyankin, I. P.

TITLE: Welding of Aluminum-Magnesium Alloy Structures in Inert Gas Medium

PERIODICAL: "Tr. Nauchno-tekhn. o-va sudostroit. prom-sti", 1959, No. 33, pp. 21-28

TEXT: The authors analyze technological problems of manual, automatic and demi-automatic welding with consumable electrode in He and argon atmosphere. The dependence is shown of the mechanical properties of butt welds of АМг6Т (AMG6T) type alloys on the quality of preparing the edges. Conditions are described for the semi-automatic welding with 2 mm diameter consumable electrode of butt and Tee joints on AMG6T alloy.

Yu. S.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

PROSYANKIN, I. P.

PHASE I BOOK EXPLOITATION SOV/5100

Kablov, Ivan Aleksandrovich, Dmitriy Mikhaylovich Levykin, Grigoriy Semenovich Pilyavskiy, and Ivan Pavlovich Prosyankin

Korpusnyye konstruktsii iz alyuminiyevykh splavov (Aluminum-Alloy [Ship] Hull Structures) Leningrad, Sudpromgiz, 1960. 151 p. 2,800 copies printed.

Scientific Ed.: P. A. Alsuf'yev; Ed.: A. I. Kuskova; Tech. Ed.: R. K. Tsal.

PURPOSE: This book is intended for technical personnel in the shipbuilding industry and other branches of industry engaged in the construction of aluminum-alloy structures.

COVERAGE: Experience gained in the construction of aluminum-alloy hull structures is discussed. Attention is given to the following: equipment and accessories used in the construction process, methods of preparing and processing aluminum alloys, types of joints for structures made of steel and aluminum alloys, the assembly, welding, and riveting of the structures, methods of protecting the structures against corrosion, and quality control. No

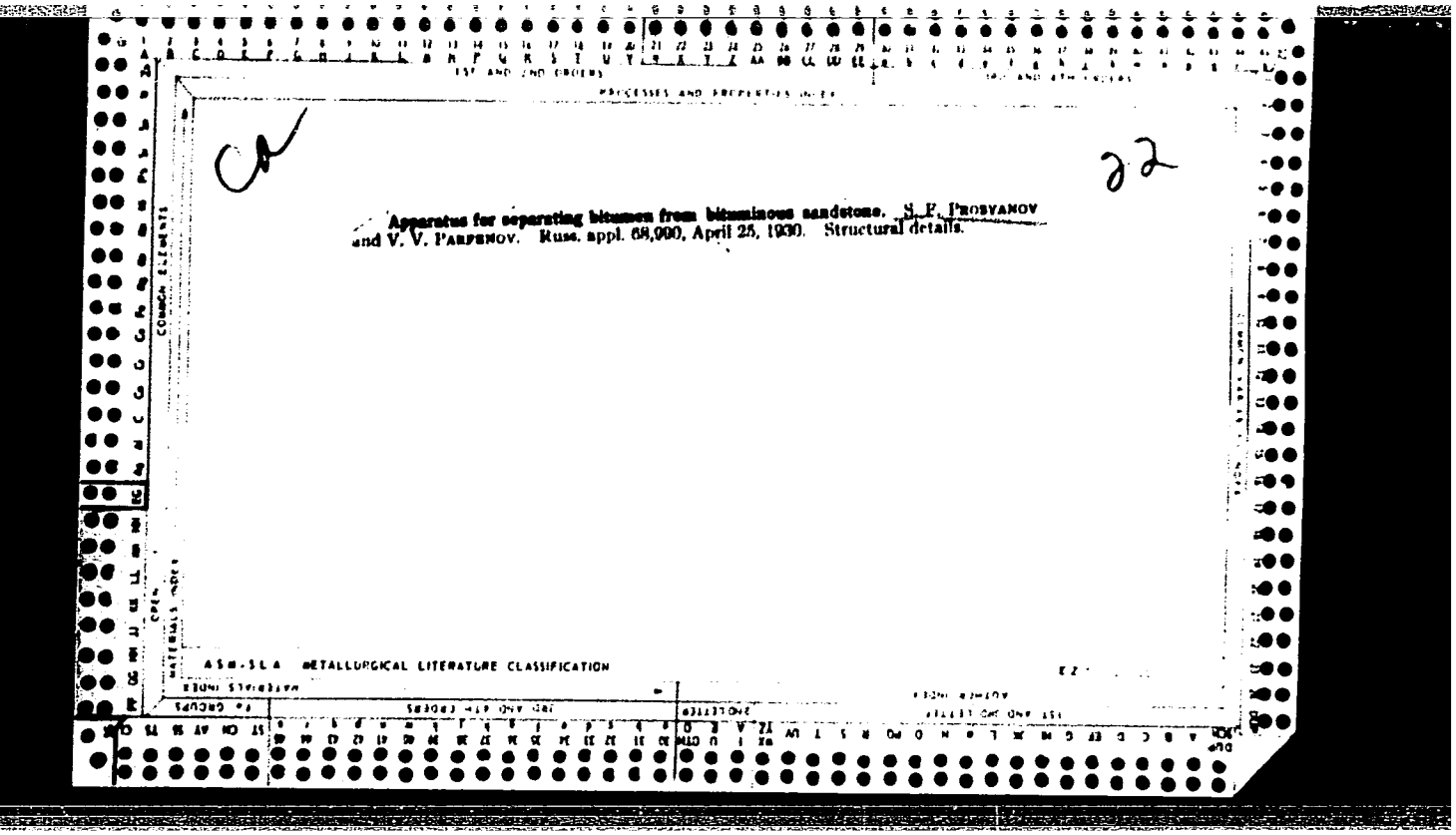
Card 1/6

PROSYANKIN, P.

SEMIN,A.; SADENKO,V.; PROSYANKIN,P. (g.Ryazan')

Planning and calculating trolley bus passenger transportation. Zhil.-kom.khoz.5 no.5:29 '55. (MLRA 8:11)

(Trolley buses)



Apparatus for separating bitumen from bituminous sandstone. S. F. PROSYANOV and V. V. PARFENOV. Russ. appl. 68,900, April 25, 1930. Structural details.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GLINKOV, M.A.; PROSYANOV, Yu.F.

Effect of the properties of liquid fuel on the luminosity of open-hearth furnace flames. Izv. vys. ucheb. zav.; chern. met. 5 no.5:170-180 '62. (MIRA 15:6)

1. Moskovskiy institut stali i Izhorskiy zavod.
(Liquid fuels)
(Open-hearth furnaces—Combustion)

GLINKOV, M.A., prof., doktor tekhn.nauk; PROSYANOV, Yu.F., inzh.

Effect of liquid fuel properties and the design of atomizers on heat processes in open-hearth furnaces. Stal' 22 no.7:653-658 Jl '62. (MIRA 15:7)

1. Moskovskiy institut stali i Izhorskiy zavod.
(Open-hearth furnaces--Design and construction)

MAGIDSON, M.A., inzhener; PROSYANOV, Yu.F.

Elimination of bangings in reversing the valves of open-hearth furnaces at the Serov Metallurgical Plant. Stal.proizv.no.1: 94-101 '56. (MLRA 9:9)

1.Metallurgicheskiy zavod imeni Serova.
(Serov--Metallurgical plants) (Open-hearth furnaces)

PROSYANYY, V. S.

Prosyanyy, V. S. "The pond fish industry if the western oblasts of the Ukrainian SSR," Trudy Nauch.-issled. in-ta prudovogo i ozerno-rechnogo ryb. khoz-va, No. 5, 1948, p. 87-104 -- Bibliog: -- 55 items

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

PROSYANIN, V.S.

USSR/Medicine - Eels Nov 48
Medicine - Biology

"Eel in Ukrainian Reservoirs," V. S. Prosyanin, 1 p

"Priroda" No 11

Eels are rare in the Ukraine. Mentions various waters in which they have been caught, and theorizes on their migration.

[redacted] 23/49195

PROSYANYY, V. S.

Prosyanyy, V. S. "On the problem of the technology of industrialized fishing on the Reservoir imeni Lenin", Trudy Nauch.-issled. in-ta prodovogo i ozerno-rech. ryb. khoz.-va, No. 6, 1949, p. 103-09, - Bibliog: 7 items.

SO: U-4392, 19 August 53 (Letopis 'Zhurnal 'nykh Statey, No 21, 1949)

PROSYANYY, V.S.

Ways for developing an over-all intensification of state pond culture in the Ukrainian S.S.R. Trudy sov.Ikht.kom. no.2:9-24 '53. (MLRA 7:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut prudovogo i ozerno-rechnogo rybnogo khozyaystva.
(Ukraine--Fish culture) (Fish culture--Ukraine)

PROSYANYY, Vladimir Stepanovich [Prosianyi, V.S.]; GRINEVICH, Sergey Ivanovich [Hrynevych, S.I.]; SHPET, Georgiy Iosifovich [Shpet, H.I.]; KONONOV, Vyacheslav Aleksandrovich; ONOPRIYENKO, M.M.[Onopriienko, M.M.], red.

[Fishpond culture] Stavove rybnytstvo. Kyiv, Vyd-vo Ukrains'koi akademii sil'skohospodars'kykh nauk, 1960. 102 p.
(MIRA 15:5)
(Ukraine—Fishponds)

PROSYANYY, V.S. [Prosianyi, V.S.]; DANILOV, K.I. [Danylov, K.I.]

Utilization of municipal sewage waters in fish culture. Khar. prom. no.3:81-82 Jl-S '65. (MIRA 18:9)

PROSYANYY, V.S.

Systems of rearing young-of-the-year carp and their epizootologic evaluation. Trudy sov.Ikht.kom. no.9:60-64 '59.
(MIRA 13:5)

1. Nauchno-issledovatel'skiy institut prudovogo i ozerno-rechnogo rybnogo khozyaystva USSR.
(Carp--Diseases and pests) (Fish culture)

PROSZT, Ervin

Problems of dimensional changes in hot-rolled light-section profiles. Koh lap 96 no.8:342-345 Ag '63.

PROSZT, Ervin

Problems of dimensional changes in hot-rolled light-section profiles. Koh lap 96 no.7:289-293 Jl '63.

PROSZT, G.

Selection of molds with high glucose oxidase activity and determination of their optium growing conditions. Elelm ipar 17 no.11:339-342 N'63.

1. Kozponti Elelmiszeripari Kutato Intezet, Budapest.

PROSZT, G.; VASS, K.

"Calculation of Time Necessary for the Heat Treatment of Preserved Foods", P. 230, (ELELMEZESI IPAR, Vol. 8, No. 8, Aug. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

VAS, K.; PROSZT, G.

Heat destruction of bacterial spores in the presence of chemical agents. Acta microb.hung. 2 no.3:235-248.1955.

1. Institute for Research in Canning, Meat Packing and Refrigeration.
(ANTISEPSIS AND ASEPSIS,
heat destruction of bact. spores in presence of chem. agents.

Reszt, G.

HD 80. Measurement of the relative equilibrium humidity of foodstuffs and its significance in the appraisement of preservability — K. Vas, G. Proszt. (*Elelmezesi Ipar* — Vol. 9, 1955, No. 1, pp. 6–14, 11 figs., 3 tabs.)

Preservability of foodstuffs depends on their degree of hydratation (moisture content). As a measure for the degree of hydratation the notion of relative equilibrium humidity was introduced, meaning the atmospheric humidity in a stated equilibrium with the moisture content of the substance. Microorganisms causing deterioration of the product will grow only if hydratation exceeds a certain limit value which in most cases proved to be about 75%. The method easily carried out in industrial control laboratories for the determination of the relative equilibrium humidity is based on the deliquescence of various hygroscopic salts. A paraffin disc divided into eight sectors is placed in the middle of a Petri dish and a series of salts which deliquesce at definite relative humidities are placed into the cavities of the segments. The material to be investigated is placed around the edge of the dish. Finally the dish is covered with a glass plate and sealed with paraffin wax. After several hours the crystals are observed through a magnifying glass and the corresponding relative equilibrium humidity is read off a chart.

PROSZT, G.

83. *Preservability of salted tomato pulp* — K. Vas, G. Proszt. (*Élelmezési Ipar* — Vol. 9, 1955, No. 4, pp. 41—45; 6 figs.) MD

Salted tomato pulp of normal composition easily becomes subject to microbial deterioration even when it contains 38 to 40% tomato solids and 8 to 10% salt. Besides *Aspergillus* species of the *glaucus* type osmophilous yeasts which cause the fermentation of the pulp have also been isolated. Within the range limit of 40 to 70% for total solids the composition resistant to osmophilous yeasts is calculable by formula $S = 25.82 - 0.273\ P$ (S = salt content, P = pulp solids). The compositions correspond to a 73 to 75% relative vapour content in the equilibrium state. A statistical analysis of the taste appraisals of soups prepared from various composition pulps has proved that organoleptic tests are essentially functions of the salt content. Optimum composition in respect to preservability and flavour is 40% P and 15% S. Upon identification the osmophilous yeast proved to be *Saccharomyces rouxi* Boutroux.

(1)

PROSZT G.

97. Microbial deterioration of green pepper preserved in vinegar — G. Proszt, K. Vas. (*Elelmezesi Ipar* — Vol. 9, 1955, No. 4, pp. 124—126, 5 figs., 1 tab.)

Whitish spots were observed on the skins of green peppers (green paprika) pickled in 2.4% acetic acid and 6% salt. The flesh around the spots frequently softened. Upon transocnlating the bacteria causing deterioration to various cuture media they proved to be gram-positive and highly resistant to acetic acid. Experiments with artificially infected paprika showed that on products in the above pickle, prepared at 55°C and kept at that temperature in a water bath for 20 minutes no infection could be observed whereas infection did appear if the solution contained only 1.2% acetic acid and 3% salt. The presence of 0.15% sodium salicylate prevents infection even in more dilute pickles. Identification of the bacteria is underway.

COUNTRY : Hungary
CATEGORY : Microbiology

ABS. JOUR. : Ref Zhur-Biologiya, No.4, 1959, No. 14837

AUTHOR : Vas,K.; Proszt, G.
INST. : Hungarian AS
TITLE : Significance of pH in Sterilization of Canned Goods

ORIG. PUB. : Acta microbiol. Acad. sci. hung., 1957, 4, No.4, 413-432

ABSTRACT : A lowering of the pH within ranges of 7.0 to 3.0 favors a shortening of the heating period required to kill the spores of Bacillus cereus. The heating time depends not only on the pH but on the acid which is used to acidify the substrate. It is shorter with lactic acid and somewhat longer with phosphoric and citric. The decrease in spore resistance is not high enough to have any significance on the reduced heating period of

CARD: 1/2

COUNTRY :
CATEGORY :

ABS. JOUR. :

AUTHOR :
INST. :

TITLE :

ORIG. PUB. :

No. 14837

ABSTRACT : canned goods in industry. But the lowering of the pH of the canned products is very important, since the lower pH stops the growth of the spores. S ores of B. cereus stop reproducing with a pH of 4.0 if the acidification is done with hydrochloric, phosphoric, tartaric, citric, or lactic acids. With the use of acetic acid, which has a specific effect, spores are not found even at a pH of 4.5. -- M.E. Kupletskaya

CARD: 2/2

VAS, K.; PROSZT, G.

The effect of removal of available water on cell form and kinetics of growth of a strain of Sacch. cerevisiae var. ellipsoideus. Acta microb.hung. 6 no.4:283-296 '59.

1. Institute for Research in Canning and Refrigeration, Budapest.

(YEASTS)

PROSZT, J.

Hungarian Technical Abst.
Vol. 5 No. 2
1953

546.641 : 545.37

6. The potentiometric determination of aluminium by fluorides — Alumínium potenciometriás meghatározása fluoriddal — J. Proszt and K. Győrbiró. (Hungarian Journal of C[illegible] Magyar Kémiai Folyóirat — Vol. 58, No 4, April 1952, pp. 117–122, 1 fig., 7 tabs.)

The direct determination of aluminium in bauxite with sodium fluoride by potentiometric titration is based on the following reaction: $Al^{3+} + 6F^- = AlF_6^{3-}$ The end point of the reaction is marked by the redox system Fe^{3+}/Fe^{2+}; FeF_6^{3-} less stable than AlF_6^{3-} is formed by Fe^{3+} in the presence of the excess fluorine ions and as a consequence the redox potential of the system decreases abruptly. Interfering titanium ions should be precipitated with sodium hydroxide before potentiometric measurements are effected. The determinations were carried out at pH 2.1 which was carefully adjusted by means of a special indicator mixture (tropeolin oo and methylene blue). The method is suitable for the analysis of irons, but the iron must be removed by electrolysis prior to titanium precipitation. The results of potentiometric titration correspond to ± 0.2 per cent and the relative error does not exceed ± 0.4 per cent. A determination including decomposition takes 30 minutes.

D. Várdányi

PROSZT, I.

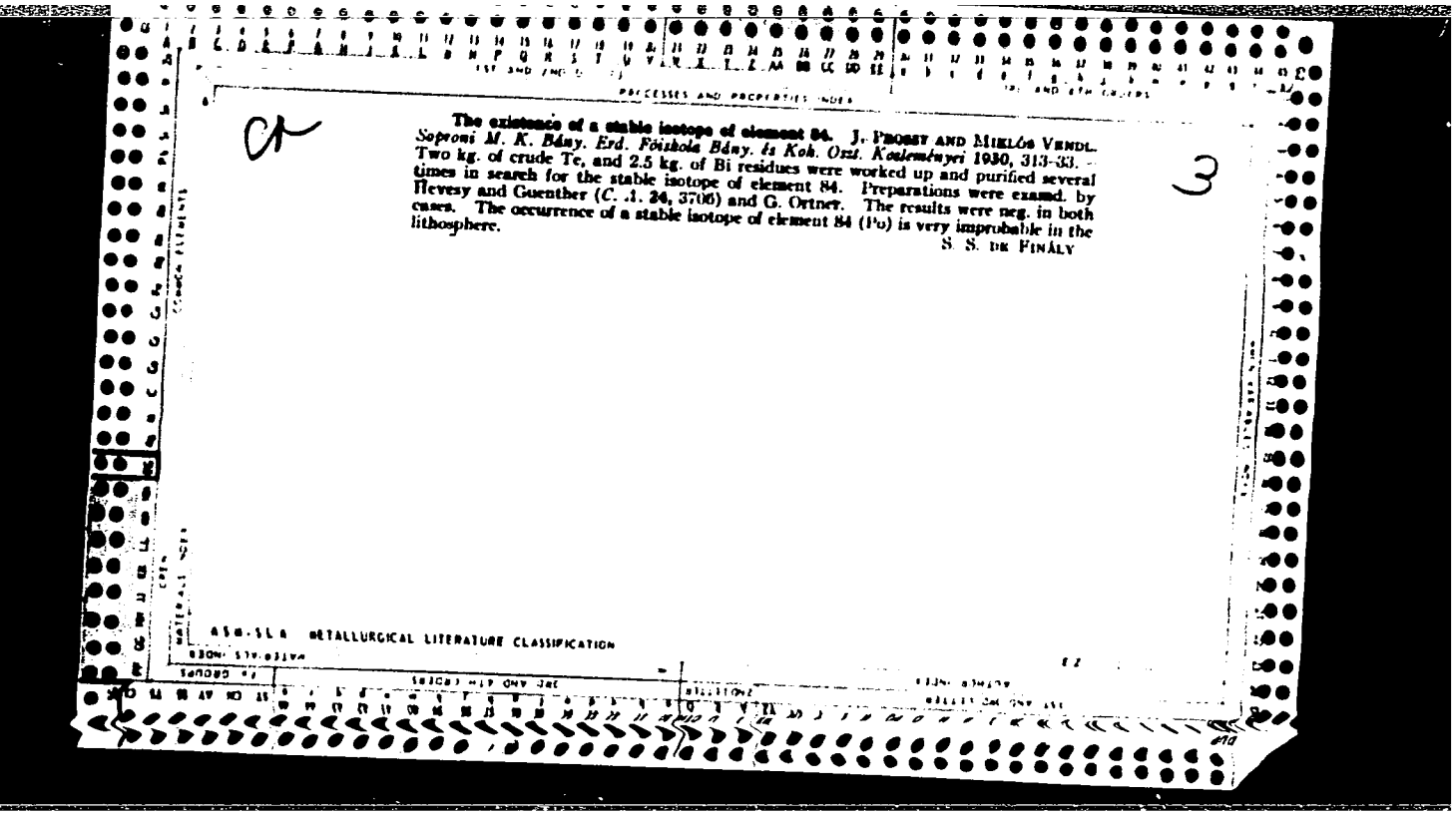
Hungarian Technical Abst.
Vol. 5 No. 4 1953

14. The production of silicones from alkoxysilanes — *Szilikonok előállítása alkoxysilánokból* — [illegible] I. Proszt and I. Nagy. (Journal of the Hungarian Chemical Society — *Magyar Kémikusok Lapja* — Vol. 7, 1952, No. 11, pp. 347—352, No. 12, pp. 373—382, 3 figs., 6 tabs.)

The utilization of silicon tetrachloride and ethanol as starting materials in the manufacture of silicones is advantageous from an economic point of view since the polyester obtained as a by-product can be used well for industrial purposes. A new process was evolved for bringing about the *Grignard* reaction (dispensing with solvents) on a large scale. By the introduction of alkyl or aryl chlorides into a suspension of metallic magnesium in tetraethoxysilane, the corresponding *Grignard* reagent is first formed which, in the second step, yields the corresponding alkyl or aryl alkoxysilanes in the presence of an appropriate catalyst. Suitable catalysts were found among the transition elements of the 4th group of the periodic table. The advantage of the new process is the elimination of ether as a solvent in the presence of catalysts. Furthermore, the reaction product is easily separated from the magnesium salts by extraction (employing ice cooling). The fractionating of the reaction mixture is much simpler than that of chlorosilanes. Hydrolysis and condensation reactions of the alkoxysilanes are easily controlled and thus cyclization reactions can be overcome. The easily transesterifiable alkoxysilane compounds combine readily with organic rosins containing free hydroxyl groups.

D. Varsányi

7-13-54



PROCESSES AND PROPERTIES INDEX

The existence of a stable isotope of element 84. J. Prodey and Miklós Vendl. *Soproni M. K. Bány. Erd. Főiskola Bány. és Koh. Oszt. Közleményei* 1930, 313-33. - Two kg. of crude Te, and 2.5 kg. of Bi residues were worked up and purified several times in search for the stable isotope of element 84. Preparations were exam. by Hevesy and Guenther (*C. A.* **24**, 3706) and G. Ortner. The results were neg. in both cases. The occurrence of a stable isotope of element 84 (Po) is very improbable in the lithosphere.

S. S. de Finály

METALLURGICAL LITERATURE CLASSIFICATION

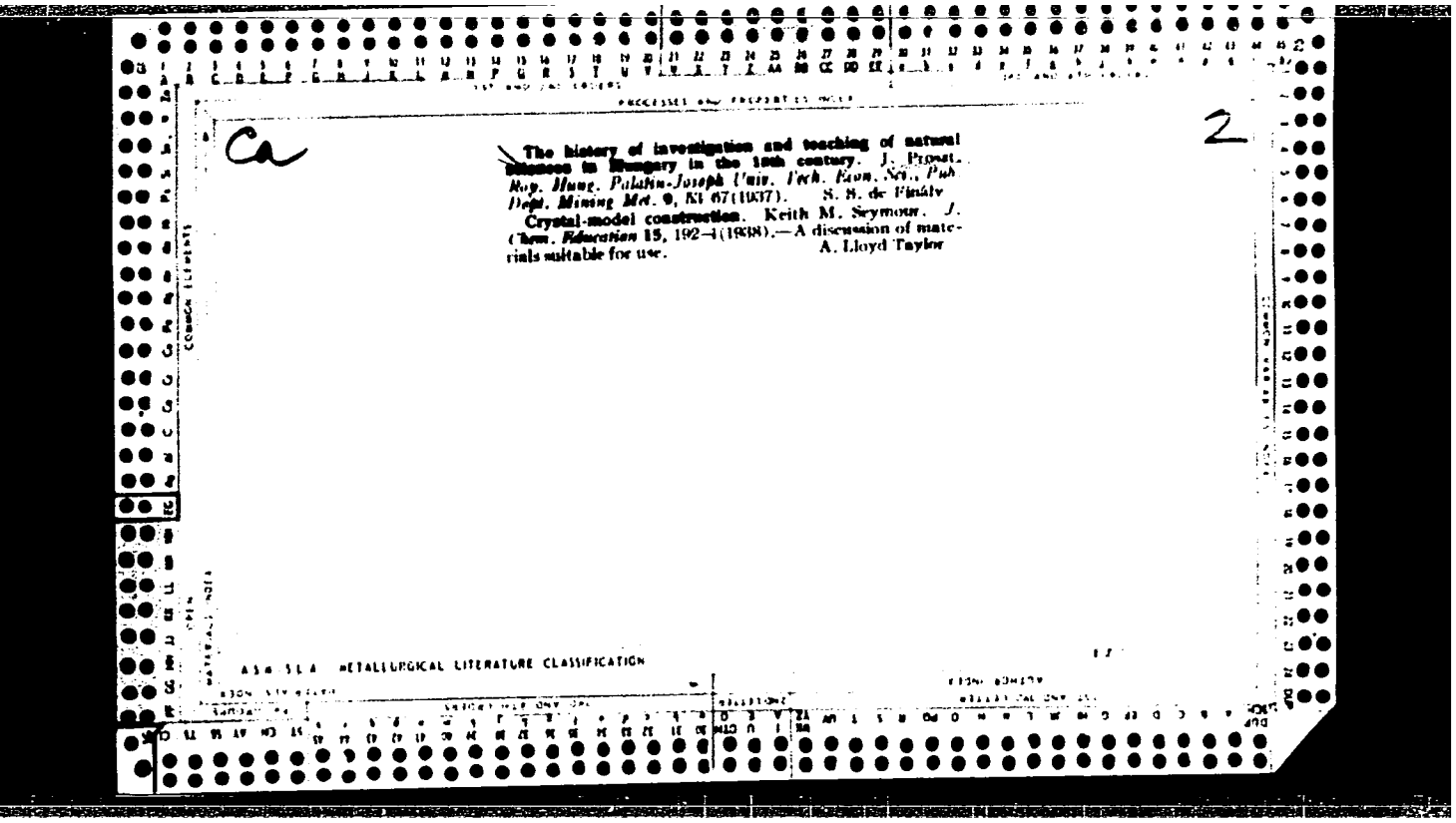
PROCESSES AND PROPERTIES INDEX

CA

2

…mension and cataphoretic velocity of disperse particle… J. Proszt. Roy. Hung. Palatin-Joseph Univ. Te…, Econ. Sci., Sopron, Pub. Dept. Mining Met. 7, 20-32 (1…). —Detns. of velocity and estimates of diam. of ve… many spherical particles in a paraffin oil emulsion pr…ed that velocity depends on particle size. In the ra… from 1 to 10 μ velocity increases directly with diam. of particle. Theoretical explanation by means of the fo…ulas of Debye and Hückel, and of Kucken is atte…nted. S. S. de Finály

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Ca

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The history of investigation and teaching of natural sciences in Hungary in the 18th century. J. Prosz. *Rep. Hung. Palatin-Joseph Univ. Tech. Econ. Sci., Pub Dept. Mining Met.* 9, 51-67(1937). S. S. de Finály

Crystal-model construction. Keith M. Seymour. *J. Chem. Education* 15, 192-4(1938).—A discussion of materials suitable for use. A. Lloyd Taylor

A 5 A 5 L A METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

An improved falling-sphere viscometer. J. Pront. Rev. Hung. Palatine-Joseph Univ. Tech. Econ. Sci. Pubs. Dept. Mining Met. 14, 34-6(1943).—An improved viscometer is described which, with the use of a falling sphere, permits detn. of temp.-viscosity curves in any temp. range. The dropping chamber, which can be rotated about an axis, is mounted on a horseshoe-shaped base in such a way that its position with respect to the base can be secured by means of a screw. The base itself is mounted in a horizontal position by means of two screws with the aid of spirit level, and is equipped with a plug box with a switch for the elec. heat conduction. The dropping app. consists of the heating cylinder and the dropping chamber. The heating cylinder, made of cast Al, is bored through axially. Semicircular grooves form a spiral along the interior of this cylinder. Cu tubing of appropriate dimension is inserted into these spiral grooves in such a way as to completely fill them. The portion of the Cu tube extending outside the cylinder serves to convey the cooling fluid. The cast Al cylinder is heated from an elec. source of 280-300 w. along a Cr-Ni wire. The heating cylinder is insulated on the outside by thick asbestos paper. The falling chamber for the measurement is in the axial boring of the Al cylinder and has a wall thickness of a little over 1 mm. (with a width in the clear of about 12 mm.) and is provided above and below with locking screws. One screw stop is bored through, and spiral glass tubing is cemented in it. The spiral is provided with a scale for detg. the sp. vol. of the fluid at each measuring temp., while it is simultaneously gaged in the dropping chamber. Under the glass spiral is a protective plate. The lower screw stop is likewise bored through, and in it is inserted a small resistance thermometer, one of whose terminal poles is located on the thermometer itself, while the other is on a revolving disk fastened to the end of the main cylinder. The disk, with the aid of the female screw below it, holds the dropping chamber in the bore of the Al cylinder. The cylinder and its insulation are pierced at two places, M_1 and M_2, radially to the axis, and in each of these bored holes, lined with glass tubing, is inserted a small square rod of special magnetic steel (Al-Ni magnetic steel of great cohesive force). The time required to traverse the distance from M_1 to M_2 is detd. by observing the magnetic rods, which are provided with protuberances of very thin glass capillaries in such a way that they are forced out by the falling sphere. The upper end of the resistance thermometer can be equipped with an elec. signal contact, as an aid in the detn. of the falling time. H. F. Pool

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

HALMOS, K., dr.; LIPOVETZ, I.; PROSZT, J., dr.

Tests for preparing stem condenser surfaces hydrophobized with silicon and investigation of their heat transfer conditions. Acta techn Hung 11 no.1/2:143-150 '62.

1. Lehrstuhl fur anorganische Chemie der technischen Universitat, Budapest. 2. Korresp.Mitgl.d.Ungar.Akademie der Wissenschaften (for Proszt).

PROSZT J. FUN G.

30. The influence of electrolytes on azeotropic systems — J. Prosztand Gy. Kollár (*Magyar Kémiai Folyóirat*, — Vol. 60, 1951, No. 1, pp. 110—116, 15 figs.)

The influence of salts and other solid matters on the vapour-liquid equilibrium of methanol-benzene, ethanol-water, ethanol-carbon disulphide, ethanol-acetone and acetone-methanol systems was investigated and the following conclusions were drawn by evaluating the obtained diagrams: (1) By the addition of suitable electrolytes the azeotropes of the above mentioned mixtures may be easily removed from these systems *i. e.* by the action of these salts, one of the components — generally that of lower dielectric constant — becomes more volatile; (2) On the vapour-liquid diagram of non-ideal binary mixtures a point is necessarily found where the system behaves like an ideal mixture. This point was designated by the authors as "Raoult's point"; (3)

1/2

In a system of two liquids not only a boiling point elevation but a boiling point depression can occur due to the influence of the added salt as compared with the equilibrium temperature of the salt-free system; (4) The extreme values (the maximum or minimum) of the boiling point curves (Δt vs. concentration) of non-azeotropic mixtures with a salt content coincide with the corresponding "Raoult's point"; (5) In the case of azeotropic systems containing salt, the Δt vs. concentration curves show another extreme value (pointed maximum or minimum); this point represents the concentration of the azeotropic mixture; (6) Consequently, it is possible to establish by simple ebullioscopic measurements whether the system in question will form an azeotropic mixture and whether this mixture will be of the minimum or maximum boiling point type; (7) Hence, by using the calculated Raoult's curve and by knowing the "Raoult's point" (see (3)) and the composition of the azeotropic mixture (see (1)) it is possible to plot the vapour-liquid equilibrium diagram with sufficient accuracy for practical purposes by relying entirely on the ebullioscopic data.

R/2

PROSZT, Janos

Bela Lengyel, 1844-1913. Magy kem folyoir 69 no.3:97 Mr '63.

1. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja.

PROSZT, J.

Hungarian Technical Abst. Vol. 6 1953

546.621 : 545.37

6. **The potentiometric determination of aluminium by fluorides** — *Alumínium potenciometrikus meghatározása fluoriddal* — J. Proszt and K. Györbíró (Hungarian Journal of Chemistry = *Magyar Kémiai Folyóirat* — Vol. 58, No. 4, April 1952, pp. 117–122, 1 fig., 7 tabs.)

The direct determination of aluminium in bauxite with sodium fluoride by potentiometric titration is based on the following reaction: $Al^{3+} + 6F^- = AlF_6^{3-}$ The end point of the reaction is marked by the redox system Fe^{3+}/Fe^{2+}. FeF_6^{3-} less stable than AlF_6^{3-} is formed by Fe^{3+} in the presence of the excess fluorine ions and as a consequence the redox potential of the system decreases abruptly. Interfering titanium ions should be precipitated with sodium hydroxide before potentiometric measurements are effected. The determinations were carried out at *p*H 2.1 which was carefully adjusted by means of a special indicator mixture (tropeolin oo and methylene blue). The method is suitable for the analysis of irons, but the iron must be removed by electrolysis prior to titanium precipitation. The results of potentiometric titration correspond to ± 0.2 per cent and the relative error does not exceed ± 0.4 per cent. A determination including decomposition takes 30 minutes. *D. Varsányi*

Chem

10-8-54

PROSZT, J.

New data on the unequivocalness of the electrokinetic potential — *Újabb adatok az elektrokinetikus potenciál egyértelműségének kérdéséhez* — J. Proszt and T. Hamos. (Hungarian Journal of Chemistry — *Magyar Kémiai Folyóirat* — Vol. 59, 1953, No. 6, pp. 165–171, 3 figs., 7 tabs.)

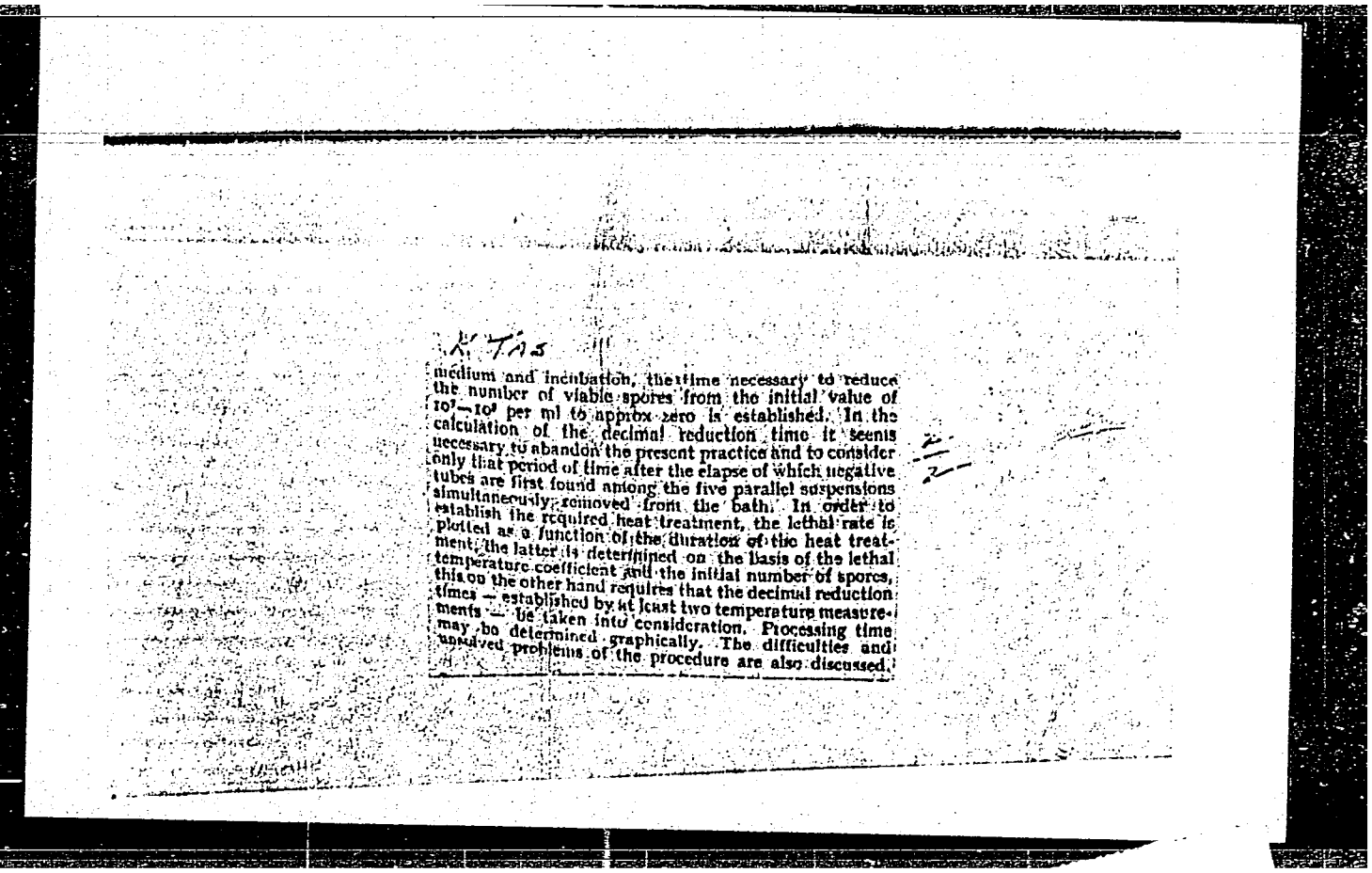
The possible causes of errors of endosmometric potential determinations are investigated. Errors due to the solubility of laboratory glassware are eliminated by lining the walls of all glass apparatuses with an insoluble, hydrophobic silicone coating. It is shown that precious metal electrodes may be used instead of unpolarizable electrodes which may be the source of impurities; the action of atmospheric carbon dioxide is decreased by integrating the endosmometer with the conductivity cell. ζ potentials of pure quartz powder suspended in redistilled water are determined by the above method and compared with potentials obtained by the cataphoretic method. These values agree thus proving the existence of a well-defined, unequivocal electrokinetic potential. It is once more proved that ζ is not only a function of the chemical composition but of the particle size as well. *J. P.*

Prosz, Tas, K.

HUNG.

99. Calculations on the heat treatment of heat processed foods, temperatures below 100°C — K. Tas, G. Prosz. (Elelmezesi Ipar — Vol. 8, 1954, No. 8, pp. 230—235, 3 figs., 2 tabs.)

In order to calculate the temperature and the duration of heat processing applied in many branches of the food industry, it is necessary to know the penetration of the heat into the treated food as well as the heat tolerance of the most resistant bacteria present. Heat penetration may be easily measured by thermocouples. For the determination of heat resistance it is important to properly choose the bacteria to be tested, the heating medium and the temperature of heating. If sterilization is to be performed in a water bath (at atmospheric pressure), a suspension should be made of the bacteria and 0.75 ml of this is metered into the test tubes (5 for each heat treatment). The latter are immersed and heat treated in an electrically controlled glycerol bath at the required temperature. After the addition of the nutrient (over)



medium and incubation, the time necessary to reduce the number of viable spores from the initial value of 10^7—10^9 per ml to approx. zero is established. In the calculation of the decimal reduction time it seems necessary to abandon the present practice and to consider only that period of time after the elapse of which negative tubes are first found among the five parallel suspensions simultaneously removed from the bath. In order to establish the required heat treatment, the lethal rate is plotted as a function of the duration of the heat treatment; the latter is determined on the basis of the lethal temperature coefficient and the initial number of spores, this on the other hand requires that the decimal reduction times — established by at least two temperature measurements — be taken into consideration. Processing time may be determined graphically. The difficulties and unsolved problems of the procedure are also discussed.

PROSZT, J.

B-8

HUNGARY/ Physical Chemistry - Thermodynamics.
Thermochemistry. Equilibrium. Physicochemical Analysis.
Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7450

Author : Proszt, J. and Kollar, G.
Title : Ebullioscopic Behavior of Liquid Binary Mixtures

Orig Pub : Magyar tud. akad. Kem. tud. oszt. koezl., 1955, Vol 6, No 3-4, 331-346 (published in Hungarian)

Abstract : On the basis of a study of liquid-vapor equilibrium in binary liquid mixtures, the authors have concluded that the dissolution of salts in the mixture always increases the volatility of the component with the lower dielectric constant. During an investigation of solutions of salts in liquid binary mixtures which do not obey Raoult's law, the authors have found that the curve giving the increase in the boiling temperature (T_M) passes through a shallow minimum or maximum; in the case of azeotropic

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Card 1/3

HUNGARY/ Physical Chemistry - Thermodynamics.
Thermochemistry. Equilibrium. Physicochemical Analysis.
Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7450

mixtures there is in addition a sharp minimum or maximum. The authors connect this type of curve with the existence in the liquid-vapor equilibrium diagram of an nonideal binary mixture of a point at which the attractive forces between like and unlike molecules are equal and the mixture therefore becomes ideal according to Raoult's law (Raoult point). At this point there is a lowering of the boiling temperature. On the basis of the above relation it is shown that the azeotropic and Raoult's points can be determined from ebulliometric measurements. In order to simplify the task and to exclude the effect of the salts, additional work was done in which the behavior of dilute solutions of nonpolar substances was studied: ΔT_n curves have been prepared for solutions with concentrations n = 1/(100- 1) (100 moles solvent, one mole solid

Card 2/3

HUNGARY/ Physical Chemistry - Thermodynamics.
Thermochemistry. Equilibrium. Physicochemical Analysis.
Phase Transitions. B-8

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7450

soluble substance). It was established that the ebulliometric curves obtained by this method agree exactly with the liquid-vapor equilibrium curves. The above method is applied to the determination of the ebulliometric curves of some real (not agreeing with Raoult's law) mixtures, starting with liquid-vapor equilibrium data (and vice versa).

See also RZhKhim, 1956, 12356.

Card 3/3

LOHONYAI, Nandor; PROSZT, Janos

Examination of the thermogalvanic batteries consisting of the hydrochloric acid quinhydrone electrodes. Magy kem folyoir 66 no.10:423-427 O '60.

1. Budapesti Muszaki Egyetem Szervetlen Kemiai Tanszeke.
2. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja (for Proszt).

PROSZT, J.

The effect of electrolytes on azeotropic systems. J. Prosz and Gy. Koller. *Magyar Kémiai Folyóirat* 60, 110–16(1954); *Hung. Tech. Abstr.* 7, No. 1, 7(1955).—The effect of salts and other solid matters on the vapor-liquid equil. of MeOH-C_6H_6, EtOH-H_2O, EtOH-CS_2, EtOH-acetone, and acetone-MeOH systems was investigated, and the following conclusions were drawn by evaluating the diagrams obtained: (1) By the addn. of suitable electrolytes, the azeotropes of the above-mentioned mixts. can be sepd. easily, i.e. by the action of these salts; one of the components, generally that of lower dielec. const., becomes more volatile. (2) On the vapor-liquid diagram of nonideal binary mixts. a point is necessarily found where the system behaves like an ideal mixt. This point was designated as "Raoult's point." (3) In a system of 2 liquids not only a b.-p. elevation but a b.-p. depression can occur owing to the effect of the added salts as compared with the equil. temp. of the salt-free system. (4) The extreme values (flat max. or min.) of the b.-p. curves (Δt *vs.* concn.) of nonazeotropic mixts. with a salt content coincide with the corresponding Raoult's point. (5) In the case of azeotropic systems contg. salt, the Δt *vs.* concn. curves show another extreme value (pointed max. or min.); this point represents the concn. of the azeotropic mixt. (6) Consequently, it is possible to establish by simple ebullioscopic measurements whether the system in question will form an azeotropic mixt. and whether this mixt. will be of the min. or max. b.p. type. (7) Hence, by using the calcd. Raoult's curve and by knowing the Raoult's point and the compn. of the azeotropic mixt., it is possible to plot the vapor-liquid equil. diagram with sufficient accuracy for practical purposes by relying entirely on the ebullioscopic data.

K. L. C.

PAGE 1

HUNGARY/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26182

Author : J. Prosxt, Gy. Kollar
Inst : Academy of Sciences of Hungary
Title : Ebullioscopic Study of Binary Liquid Mixtures

Orig Pub : Acta chim. Acad. sci. hung., 1955, 8, No 1-3, 171-189

Abstract : While studying the equilibrium liquid - vapor (LV) in binary systems (BS) (see also RZhKhim, 1957, 7450), the authors discovered that the component of a lesser dielectric constant became more volatile under the action of dissolved salts. It was detected during the study of causes of this salt effect that there was a flat minimum (or maximum) on the curves of the boiling temperature rise in 1 M solutions of slats in BS which are not ideal according to Raoult. Besides, in case of azeotropic systems, these curves pass also through a sharp maximum (or minimum) at the point corresponding to the composition of the azeotrope. This

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phenomenon was explained by the presence of a special point on the equilibrium curve of LV of non-ideal BS, at which point the system behaved ideally following Raoult's law. The authors named this point "Raoult's point". The most selective solvatation of ions takes place at Raoult's point in consequence of the equalization of attraction potentials between similar and dissimilar molecules of the liquid. Such a slat effect can exceed even the "classical" ebullioscopic effect causing a drop of the boiling temperature. Ebullioscopic measurements in salt containing systems allow to establish the presence or absence of an azeotrope as well as to determine the position of the azeotropic and Raoult s points. Passing to the study of diluted solutions, the authors used completely nonpolar substances as additions in order to exclude the slat effect completely. The magnitudes of the boiling temperature rise referred to solutions containing 1 mol of solid substance in 100 mols of mixed solvent.

HUNGARY/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26182

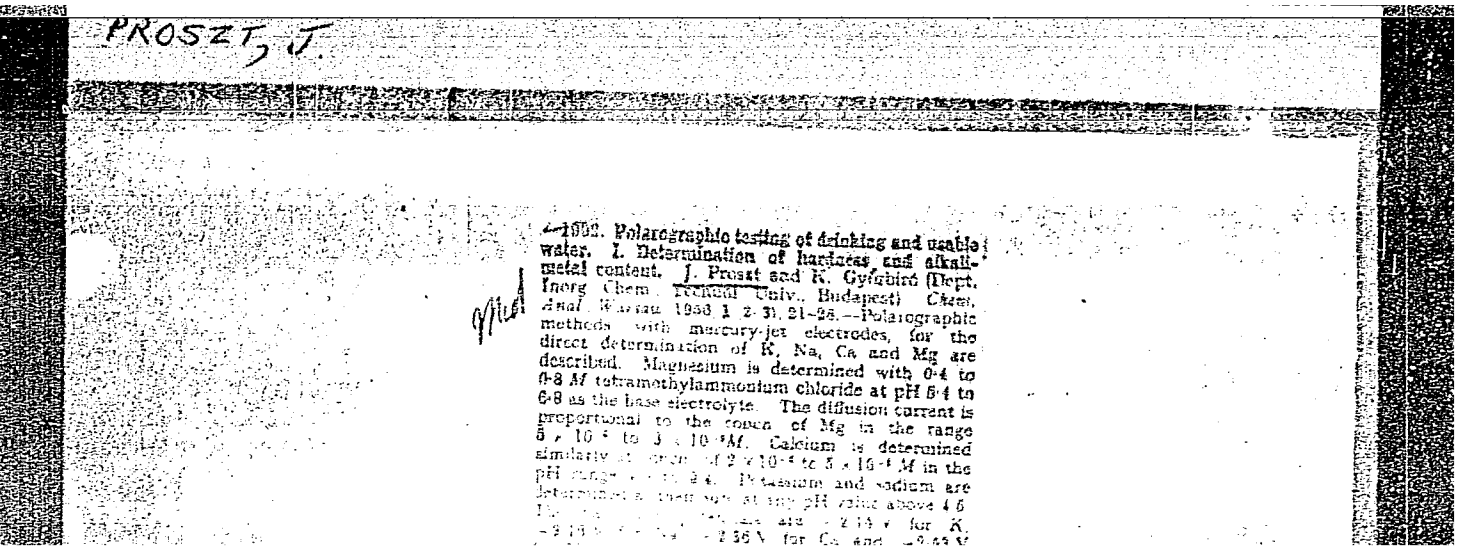
The possibility of the computation of real ebullioscopic curves on the basis of experimental data of LV equilibrium is demonstrated on concrete example. The computations are reversible: the ebullioscopic data permit to compute the course of the LV equilibrium curve. An increased precision of the computation is foreseen by the introduction of corresponding adjustments.

Card : 3/3

PROSZT, J.

Domestic production and practical use of silicons, p. 98
(Electrotechnika, Budapest, Vol. 48, no. 3, Mar. 1955)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, no. 6, June 1955 Uncl



PROSZT, J.

1952. Polarographic testing of drinking and usable water. I. Determination of hardness and alkali-metal content. J. Proszt and K. Gyurbiró (Dept. Inorg. Chem. Technol. Univ., Budapest) Chem. Anal. Warsaw 1958 3 2-3, 21-26.—Polarographic methods with mercury-jet electrodes, for the direct determination of K, Na, Ca and Mg are described. Magnesium is determined with 0·4 to 0·8 *M* tetramethylammonium chloride at pH 5·4 to 6·8 as the base electrolyte. The diffusion current is proportional to the concn. of Mg in the range 5×10^{-5} to 3×10^{-4} *M*. Calcium is determined similarly at concn. of 2×10^{-5} to 5×10^{-4} *M* in the pH range [illegible] 4. Potassium and sodium are determined at their own at any pH value above 4·6 [illegible] are −2·14 v for K, −2·36 V for Ca and −2·69 V

Polarographic investigation of drinking and usable water. II. Determination of the hardness and of the content of alkali metals. J. Prószt and K. Györbíró (Technol. Univ., Budapest). *Chem. Anal.* (Warsaw) 1, 129-38(1956)(English summary); *Anal. Chim. Acta* 15, 585-91(1956)(in German).—A rapid method of direct detn. of Ca^{++} and alkali metals ($Na^+ + K^+$) in basic soln. of Me_4NCl by using a modified Hg jet-electrode has been worked out on the basis of the authors' method of polarographic detn. of Mg^{++}. The results of detn. of Ca^{++} and Mg^{++} agree with those obtained by the versenate method and for ($Na^+ + K^+$) with the results by the ion-exchange method.

A. Kregiewski

2

PROSZT, J. and KIS, J.

4

Evaluation of paper chromatograms by polarocoulometry.

Janos Proszt and Julia Kis (Tech. Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 9, 101–4(1950)(in German).—A method is described for eluting adsorbed materials from paper chromatograms and detg. their amt. by use of a microcoulometer. H. K. Zimmerman

PM
MT

PROSZT, J.

2

16. A polarographic investigation of natural and industrial waste waters. I. Determination of hardness and alkalies. J. Proszt, K. Györbíró. *Magyar Kémiai Folyóirat*, Vol. 62, 1956, No. 10, pp. 342—345

Alkali metals as well as Ca(II) and Mg(II) ions can be determined in the presence of each other by polarography with a modified Heyrovsky streaming mercury electrode in $[N(CH_3)_4]Cl$ base solution. As a result of the favourable configuration of the half-wave potentials, the waves of Ca(II) and Mg(II) ions appear on the streaming mercury electrode, and thus they can be separated from each other and from the common (K+Na+) wave. The waves are free of maxima, their shape is correct and they can be readily evaluated. The method is suitable for the determination of the Ca and Mg-hardness of waters. Though the result of the polarographic determination is slightly less accurate than that of the complexometric procedure, it is much simpler and quicker. Another advantage of the polarographic method is that the alkali content of the water in question can be determined by the same recording; thus the procedure is very suitable e.g. for the rapid examination of mineral waters.

FROST, J.

Introduction. In German. p. 1. (Acta Chimica, Vol. 9, No. 1/4, 1956, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

PROSZT, J.

HUNGARY/Physical Chemistry - Electrochemistry. B-12

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 20788

Author : K. Györbiró, L. Poós, J. Proszt.

Inst : Academy of Sciences of Hungary.

Title : Polarography of Magnesium.

Orig Pub : Acta chim. Acad. sci. hung., 1956, 9, No 1-4, 27-36.

Abstract : It was found at the study of oscillographic curves (v, t) obtained on a Hg drop electrode for the solution of Mg^{2+} in 0.7 M $(CH_3)_4NCl$ that Mg^{2+} produced a reversible stage at -2.55 v. But the polarographs of the same substance taken on an improved (RZhKhim, 1956, 61824) flowing electrode (FE) have the shape of ordinary waves without maxima (M). The height of these wave is proportional to the Mg^{2+} concentration at c from $5 \cdot 10^{-4}$ to $3 \cdot 10^{-3}$ M; if c was greater than $3 \cdot 10^{-3}$ M, a M appears on the waves, the

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HUNGARY/Physical Chemistry - Electrochemistry. B-12

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 20788

magnitude of the M decreases with the decrease of the FE length. The FE wave is observed at pH of 5 to 9.5: $E_{\frac{1}{2}}$ does not depend on pH (-2.59 v according to the standard c. e.). In the authors' opinion, the M on the Mg^2 waves is caused by the increase of Mg^{2+} concentration at the electrode surface due to the hydrolysis of Mg amalgam forming at the electrolysis.

Card 2/2

B.

HUNGARY/Physical Chemistry - Electrochemistry.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28074

Author : Paulik, J. and Proszt, J.

Inst : Hungarian Academy of Sciences.

Title : A New Method for the Recording of Derivatives of Polarograms.

Orig Pub : Acta Chim Acad Sci Hung, 9, No 1-4, 161-169 (1956) (in German with a summary in English)

Abstract : A new method has been developed for the recording of derivatives of polarograms (DP): the current passing through the polarographic cell as the applied voltage is varied uniformly is passed through the primary winding of a transformer, inducing a current proportional to the time (or voltage) derivative of the current in the primary circuit. The secondary of the transformer

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Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28074 B.

is connected to a recording galvanometer. It is noted that the above-putlined procedure yields strictly symmetrical DP's. The height of the DP is quite adequately reproducible and proportional to the concentration of the depolarizer. The potential of the peak in the DP coincides exactly with the $E_{1/2}$ [TN: half-wave potential] of the usual waves.

PROSZT, J.

1356. Polarographic investigation of potable water and of water for industrial use. The determination of hardness and of alkalis. J. Proszt and K. Györbíró (Inorg. Chem. Inst., Tech. Univ., Budapest). *Anal. Chim. Acta*, 1956, 15 (6), 555–561.—Milligram amounts ($\simeq 10^{-3}$ to 10^{-4} *M*) of Ca^{2+}, Mg^{2+} and $(Na^+ + K^+)$ in the water can be determined rapidly by a polarographic procedure, with a modified streaming-mercury electrode. The supporting electrolyte is a 0·4 to 0·8 *M* soln. of tetramethylammonium chloride, the cell resistance is 340 ohms and the c.d. $\simeq 10^{-4}$ amp. In contrast with the dropping-mercury electrode, the arrangement described ensures a favourable shift of $E_{\frac{1}{4}}$, so that a sharp separation of the four waves (those of Na^+ and K^+ are very close together) is obtained and the wave heights are proportional to concn. The hardness of the water can also be determined. The max. error is $\simeq \pm 4\%$ for Mg^{2+} or Ca^{2+} and $\pm 3\%$ for $(Na^+ + K^+)$.

W. J. Baker

Chem

P Rost 2, 3

2648. The polarography of magnesium. K. Győrbíró, L. Pogs and I. Proszt (Tech. Univ., Budapest). *Magyar Kém. Foly.*, 1958, 61 (3), 102–106.—By using a special streaming-mercury electrode, clear potential curves were obtained in 0·7 *M* tetramethylammonium chloride soln. with concentrations of Mg^{++} in the range 3×10^{-3} to 5×10^{-4} *M*; $E_{\frac{1}{2}} = -2{\cdot}00 \pm 0{\cdot}02$ V *vs.* the S.C.E. The best pH range for polarography is between 6·4 and 6·8. Calcium and particularly lithium interfere; potassium does not. A. G. Peto

PROSZT, JANOS

Hungary/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61824

Author: Gyorbiro, Karoly; Poos, Laszlo; Proszt, Janos

Institution: None

Title: Polarography of Magnesium

Original Periodical: A magnezium polarografiaja, Magyar kem. folyoirat, 1956, 62, No 3, 102-106; Hungarian; German resumé

Abstract: Mg is reduced at a flowing Hg-cathode and gives a clearly defined wave with $E_{1/2}$ = -2.6 v. A polarographic method has been worked out for determining $5 \cdot 10^{-4}$ - $3 \cdot 10^{-3}$ M solutions of Mg in the presence of K with a background of 0.7 M $N(CH_3)_4Cl$ at pH 5.4-6.8. Li^+ and Ca^{2+} interfere.

Card 1/1

Prost, J.

12. A new method for the derivation of polarograms. J. Paulik, J. Prost, *Magyar Kémiai Folyóirat*, Vol. 62, 1956, No. 7, pp. 220—223, 7 figs.

A new method has been developed for the recording of derived curves in polarography. The current to be differentiated is conducted into the primary coil of a suitable transformer. The current induced in the secondary coil supplies the derivative of the polarographic current directly, which can be recorded in the usual way by a galvanometer. The curve obtained in this manner accurately follows each minute change of the undifferentiated polarogram, the abscissa values of its maximum and of the inflection point of the primary curve coincide perfectly. In case of ideal stages the differentiated curve is completely symmetrical and a shift of the point of maximum, often experienced when differentiating with the condenser method, cannot be observed

PROSZT, J. ; POOS, L.

Polarocoulometry; a new method for determining concentrations. In German.

P. 25. (PERIODICA POLYTECHNICA. CHEMICAL ENGINEERING) (Budapest, Hungary)
Vol. 1, no. 1, 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

PROSZT, J. : GYORBIRO, K.

Polargraphic analysis of drinking water and water suitavle for industrial use; determination of hardness and alkali content.

P. 198 (Chemicke Zvesti) Vol. 11, No. 4, Apr. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 7, NO. 1, JAN. 1958

HUNGARY / Analytical Chemistry. General Problems. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42035.

Author : Proszt, J.
Inst : Hungarian AS.
Title : Studies in the Field of Polarography.

Orig Pub: Magyar tud. akad. Kem. tud. oszt. közl., 1958, 10, No 2, 163-174.

Abstract: The results of comprehensive research made by the author in the field of polarography are described. 1. The important role played by pH is established in the study of polarographic determination of small quantities of Al: free acid is indispensable for the inhibition of hydrolyses, but an excessive amount brings forward the mixing of half waves of H and Al. The optimal pH is 3.3-3.4, determined approximately by the mixed indicator dimethyl

Card 1/6

HUNGARY / Analytical Chemistry. General Problems. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42035.

Abstract: yellow-methylene blue. It is determined with more precision with an Sb electrode. pH is easier to control, while using a recording polarograph, by observing the aspect of the recorded polarographic curve. HCl or MgO suspension is added to the polarographed solution, if necessary. The oxygen is to be eliminated by way of passing N_2 or H_2. The least determinable concentration of Al is $2 \cdot 10^{-4}$ n. (2 mcg./ml. of Al); the error is $\pm 2\%$. The method is applied to determine Al in steels and Al amalgams. 2. The method of polarographic determination of NH_4^+ described previously (Ishibasi and others, Mezinarodniho polarografickeho sjezdu, Praha, 1951, 120) has been improved. Instead of $[N(CH_3)_4]OH$, a haloid salt of tetramethylammonium is used as the

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HUNGARY / Analytical Chemistry. General Problems. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42035.

Abstract: background. The base for alkalization (until phenolphthalein gets a pink coloration) is separated from this salt by electrolysis with the aid of an immersed sound (Pt cathode, Ag anode). It is possible to determine 0.1 mcg N with this improved method. 3. The anomalous behavious of Mg^{+2} during polarography, which is the reason for not using the polarographic method in order to determine it, was studied by utilizing the method of oscillopolarography, with a flowing Hg electrode. On the basis of obtained results, the method of polarographic determination of Mg, using a flowing electrode, is developed for the first time: the background solution is 1 M solution of $[N(CH_3)_4]Cl$; pH 5.4-6.8; $E_{1/2}$ on the cathode branch - 2.55 v. (2.85 v. for the background). Of

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HUNGARY / Analytical Chemistry. General Problems. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42035.

Abstract: all alkali and alkali-earth metals only Li hinders the determination of Mg. Under the conditions described above Ca^{+2} makes $E_{1/2}$ more positive by 0.2 v. than $E_{1/2}$ of Mg^{+2}. The common wave Na^{+} and K^{+} is also clearly separated from the wave Ca^{+2} and Mg^{+2}. This creates the possibility of using this method for a quick analysis of water. It is noted that the flowing Hg electrode can be utilized not only in oscillopolarography, but also in classical polarography. In this case, the values of $E_{1/2}$ are displaced to a greater extent in relation to the normal potentials than with a dropping Hg electrode, and they are disposed over a wider range. The presence of an anomalous maximum on the Mg^{+2} wave, when the dropping Hg electrode is

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E

HUNGARY / Analytical Chemistry. General Problems.

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42035.

Abstract: used, is produced, in the author's opinion, by too large an accumulation of Mg^{+2} in the diffusion layer, as a result of the quick decomposition of the Mg. amalgam. 4. A new device is recommended for plotting derivative polarographic curves when studying substances with $E_{1/2}$, which are situated close to one another. The maximums of the derivative curve coincide exactly with the corresponding values of $E_{1/2}$, but their height is not quite proportional to the concentration. It is therefore recommended to project the minimums of these curves on the primary polarographic curve, to find the beginning of the reduction of the given ion and hence to determine the height of the waves. 5. In some cases, it is necessary to integrate the

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HUNGARY / Analytical Chemistry. General Problems. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42035.

Abstract: polarographic current (in chromatopolarography, for instance). Accordingly, it is recommended to carry out coulometric measurements and to utilize for this end a specially constructed hydrogen microcoulombmeter working on the principle of a dilatometer: electrolyte - diluted H_2SO_4; cathode - Pt-soot on silver plated glass; anode - H_2SO_4, formed on the surface of Hg (the electrolyte and the cathode are saturated with hydrogen). 6. A new quantitative method of analysis - polarocoulombmetry, is described: the total current passing through a vessel with a dropping Hg electrode in a strictly determined time, automatically recorded, is measured with the aid of a coulombmeter. -- I. Krishtofori.

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PROSZT, J.

POLAND/Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Phase Transitions. Physical-Chemical Analysis. B

Abs Jour: Ref Zhur-Khim., No 5, 1959, 14531.

Author : Proszt J., Koller G.
Inst :
Title : Decrease of Boiling Temperatures of Liquid Mixtures Containing Salt Solutions.

Orig Pub: Roczn. chem., 1958, 32, No 3, 611-621.

Abstract: The effect of dissolved salts (LiCL, LiI, NaI and $CaCl_2$) upon the liquid-vapor equlibrium in certain binary mixtures: methanol - benzol, ethanol-water, acetone - methanol, acetone - chloroform has been examined. In the presence of the dissolved salt,

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Abs Jour: Ref Zhur-Khim., No 5, 1959, 14531.

the component with a smaller dielectric constant is always characterized by a higher relative volatility. It has been demonstrated that the curve showing the increase of the boiling temperature as a function of the mixture compound for 1M of the salt solution (0.1 mole of salt per 100 milliliters of the liquid mixture) in all cases passes through the blunt maximum (if the more volatile component in a pure state has a larger dielectric constant) or minimum (if the more volatile component in a pure state has a smaller dielectric constant). The abscissa of this extreme coincides with the abscissa of the intersection point of the real curve of the

B

POLAND/Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Phase Transitions. Physical-Chemical Analysis.

Abs Jour: Ref Zhur-Khim., No 5, 1959, 14531.

liquid-vapor equilibrium with the ideal equilibrium curve (Raul's point). The extreme point (corresponding to Raul's point) of the activity coefficient of the components obtained on the curve for the decrease of the boiling temperature is equal to a unit; the interaction of the identical and different molecules of the liquid components of the mixture is the same ($a_{11} = a_{22} = a_{12}$) and the solvation process of the salt ions proceeds with maximum selectivity. The behavior of azeotropic systems has been examined. - S. Dyk.

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PROSZT, J.

Pal Kitaibel as chemist; a lecture given at the commemorative session of the Hungarian academy of Sciences on June 8, 1958. p. 123

A MAGYAR TUDOMANYOS AKADEMIA V. OSZTALYA BIOLOGIAI CSOPORTJANAK KOZLEMENYEI. Budapest, Hungary. Vol. 2, no. 2, 1958.

Monthly List of East European Accession (EEAI), LC, Vol. 9, no. 2, Feb. 1960

Uncl.

PROSZT, J.

Polarographic studies. p. 163

Magyar Tudomanyos Akademia. Kemiai Tudomanyok Osztalya. KOZLEMENYEI. Budapest, Hungary, Vol. 10, No. 2, 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 7, July 1959
UNCL

38641

S/081/62/000/009/069/075
B160/B101

15.7140

AUTHORS: Proszt, János, Kuszmann, Jánosné, Lipovetz, Iván, Nagy, József

TITLE: Method of making silicone-based heat-resistant and anti-corrosion varnishes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 633, abstract 9P327 (Eljárás szilikon alapú hőálló szigetelő és korrózióvédő lakkok előállítására. Hungarian patent 147714, October 15, 1960)

TEXT: Silicone resin for heat-resistant and anti-corrosion varnishes can be made from polyorgano-siloxane having an R:Si ratio of 1-1.5 and a degree of polycondensation of 10-100, which has been produced from alkyl-, aryl- or alkyl-aryl alkoxysilane by total hydrolysis in the presence of water and p-toluene-sulfo acid (I). The resin is obtained by the interaction of this with a modified polyalkoxy-oligo-organosiloxane having the general formula $RO-SiR_1R_2-O\left[-SiR_1R_2-O\right]_n-SiR_1R_2-OR$, where R is an alkyl radical with 1-2 atoms of C whilst R_1 and R_2 are saturated or unsaturated hydrocarbon or

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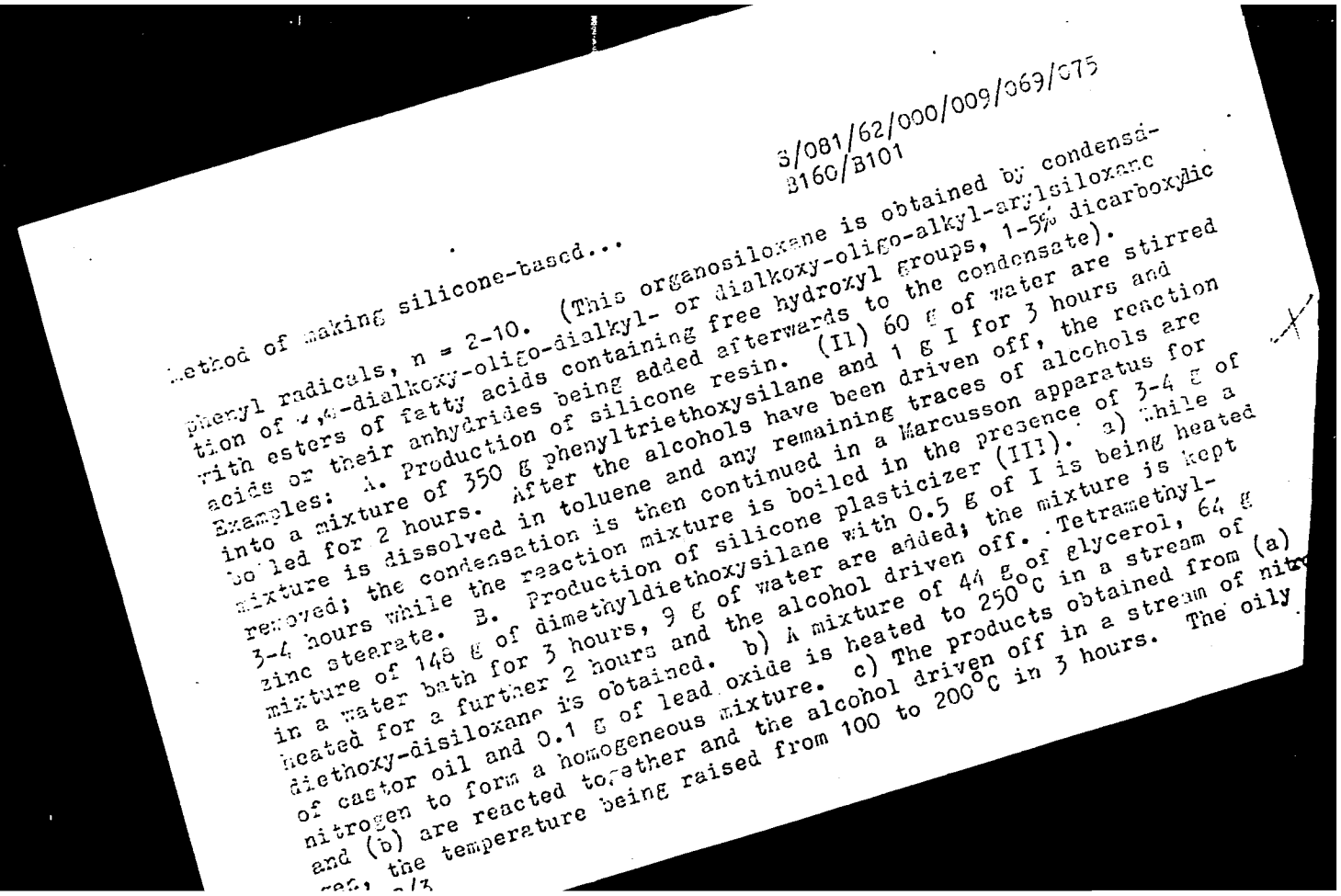

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B160/B101

...ethod of making silicone-based...

phenyl radicals, n = 2-10. (This organosiloxane is obtained by condensation of ω,ω-dialkoxy-oligo-dialkyl- or dialkoxy-oligo-alkyl-arylsiloxane with esters of fatty acids containing free hydroxyl groups, 1-5% dicarboxylic acids or their anhydrides being added afterwards to the condensate). Examples: A. Production of silicone resin. (II) 60 g of water are stirred into a mixture of 350 g phenyltriethoxysilane and 1 g I for 3 hours and boiled for 2 hours. After the alcohols have been driven off, the reaction mixture is dissolved in toluene and any remaining traces of alcohols are removed; the condensation is then continued in a Marcusson apparatus for 3-4 hours while the reaction mixture is boiled in the presence of 3-4 g of zinc stearate. B. Production of silicone plasticizer (III). a) While a mixture of 148 g of dimethyldiethoxysilane with 0.5 g of I is being heated in a water bath for 3 hours, 9 g of water are added; the mixture is kept heated for a further 2 hours and the alcohol driven off. Tetramethyldiethoxy-disiloxane is obtained. b) A mixture of 44 g of glycerol, 64 g of castor oil and 0.1 g of lead oxide is heated to 250°C in a stream of nitrogen to form a homogeneous mixture. c) The products obtained from (a) and (b) are reacted together and the alcohol driven off in a stream of ni... ref. the temperature being raised from 100 to 200°C in 3 hours. The oily

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Method of making silicone-based ...

reaction mixture so formed is heated to 230°C; 10.6 g of phthalic anhydride are added slowly and the temperature is raised to 240-250°C. After cooling, the product is dissolved in toluene. C. Condensation of II and III is carried out while boiling the toluene. The toluene solution of the varnish is filtered and evaporated to a resin content of 40%. 600-700 ml of a 40% solution of resin is obtained. [Abstracter's note: Complete translation.]

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PROSZT, JANOS

4

V Revision of the classical law of molecular boiling-point elevation. I. Gyorgy Kollár and János Proszt (Tech. Hochschule, Budapest, Hung.). Z. physik. Chem. (Leipzig) 215, 215-28(1960).—The so-called molar concn. scale as introduced by van't Hoff into the definition of the molal b.-p. elevation regards the solvent as an indifferent medium and is therefore not appropriate to characterize the elevation as a const. dependent on the solvent. If, however, the b.-p. elevation of the soln. is referred to 1 mole of the vapor pressure-lowering substance dissolved in 100 moles of the solvent, a mole-proportional ebullioscopic const. valid for 760 mm. Hg is obtained (ΔT_{760}); this const. also expresses theoretically the specific ebullioscopic behavior of the solvent. This const. or, in general, the mole-proportional ebullioscopic value Δp for the pressure p can be calcd. exactly from the vapor pressure curve for any pressure (or temp.) by: $\Delta T_p = p/100\,(dp/dT)$. If the value of dp/dT is calcd. by the Antoine equation, the equation $\Delta T_p = (C + t)^2/230.26B$ is obtained. Between the log of the mole-proportional b.-p. elevation of nonpolar solvents and that of their boiling temps. there exists the linear relation: $\log \Delta T_p = x \log T + \log y_p$, where x is a const. characteristic for these groups of liquids, and y_p is a pressure function. As the function $y_p = f(p)$ and x can be detd. exptl., only the b. temp. for the pressure p is required for calcg. ΔT_p.

Friedrich Epstein

PROSZT, J., prof. (Budapest); HEGEDUS-WEIN, I., Frau (Budapest)

Colorimetric determination of carbon dioxide in small quantities in gas mixtures. Peridocz polytechn chem 4 no.1:1-8 '60. (EEAI 9:12)

1. Institut fur Anorganische Chemie der Technischen Universitat, Budapest.
(Carbon dioxide)
(Gases)
(Colorimetry)

SCHNEER, Anna, a kemiai tudomanyok kandidatusa (Budapest); PROSZT, Janos; PUNGOR, Erno, a kemiai tudomanyok doktora (Budapest); SZARVAS, Pal, a kemiai tudomanyok kandidatusa

An account of the 1959 work of the Committee of Inorganic and Analytical Chemistry, Hungarian Academy of Sciences. Kem tud kozl MTA 15 no.3:375-395 '61.

1. Magyar Tudomanyos Akademia Szervetlen es Analitikai Kemiai Bizottsag, Budapest (for Schneer) 2. Szerkesztobizottsagi tag, Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei and lev.tag (for Proszt) 3. Eotvos Lorand Tudomanyegyetem Szervetlen Kemiai Tanszek, Budapest (for Pungor)

(Hungarian Academy of Sciences)
(Hungary--Chemistry, Inorganic)

KOLLAR, Gyorgy, a kemiai tudomanyok kandidatusa (Budapest); PROSZT, Janos, akademiai lev.tag(Budapest)

Determination of Antoine constants independently from vapor tension curve. Kem tud kozl MTA 16 no.1:47-52 '61.

1. Budapesti Muszaki Egyetem, Szervetlen Kemiai Tanszek.

(Vapors) (Equations) (Organic compounds)